

## THE UNITED STATES AND WORLD COTTON OUTLOOK

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### **Introduction**

The world cotton situation for the current season, 2001/02, is one of record production and stagnant demand. World stocks are forecast to rise about 5 million bales to nearly 44.0 million, almost half of world consumption. World prices responded by falling to a low of 37 cents in October, the lowest monthly price since August 1986. As a result, the 2002/03 season will start from a position of extreme surplus. The market will attempt to adjust either on the supply side, by constraining production, or on the demand side, by stimulating consumption. If these adjustments are not sufficient to reduce stocks to more normal levels, then prices cannot return to historical averages.

### **World Cotton Situation, 2001/02**

#### **World Cotton Production, 2001/02**

World production is expected to total nearly 97.0 million bales this season, an increase of 9.5 percent. The U.S. crop is rising nearly 17 percent to a record level of 20.1 million bales, due to increases in both area and yield. Foreign cotton area surged in 2001/02 as producers in China, India, and Africa's Franc Zone revised their price expectations upwards. China's farmers, in addition to rebounding from the first shock of price reform, also benefitted from widespread adoption of Bt cotton, and responded to government efforts to curtail grain production. China's area rose 20 percent, with most of the increase in the eastern provinces, and production totaled an estimated 24.4 million bales, a 4.1-million-bale increase from the 2000 crop. India's cotton producers, in response to higher prices for cotton and price-depressing supplies of Indian rice, planted 618,000 additional hectares to cotton, and production rose 900,000 bales. In Pakistan, although a prolonged drought entered its third year, cotton area rose as planted area shifted from rice to cotton, a less water-intensive crop, and falling yields only cut the crop there by 400,000 bales. Central Asia's area continued on the upward trend it has shown since 1996, and the Franc Zone's area shot up 19 percent as Mali's farmers returned to cotton after a strike the previous season. Yields in Central Asia and the Franc Zone also surged, and production in each region rose 800,000 bales and 1.3 million bales, respectively.

Southern Hemisphere area fell 16 percent from the year before in 2001/02 as cotton prices tumbled through the end of 2000/01 and into early 2001/02, and production is forecast 1.9 million bales lower than the year before. Argentina's area was also driven downward by economic problems that culminated in its recent devaluation. However, while area fell in Brazil, Argentina, Paraguay, and Australia, the southern hemisphere accounts for only about 10 percent of world cotton area and production. With China's area rebounding to its highest level since the mid-1990's, and increases of around 500,000 hectares in both India and the Franc Zone, foreign cotton area rose 1.7 million hectares

from the year before in 2001/02, a 6 percent increase, to 28.4 million hectares. Foreign production rose 5.5 million bales, to 76.8 million bales, less than 2 percent below its 1991/92 record high.

### World Cotton Consumption, 2001/02

World cotton consumption for MY 2001/02 is forecast at 91.7 million bales, down 250,000 bales (less than 0.5 percent) from 2000/01. Despite the rather stable world picture, there have been marked changes in individual countries. The United States is the largest retail user of cotton, accounting for roughly 20 percent of total world cotton consumption. The U.S. recession has dampened end use in the United States and impacted mill demand in many countries. The U.S. spinning industry has borne the brunt of the stagnation in the U.S. retail market, while foreign consumption is estimated to increase by 1.3 million bales to a record 84.4 million.

Mexico's spinning industry, which is also heavily dependant on the U.S. market, is continuing to experience difficulties, with mill use forecast down 10 percent in 2001/02, the second consecutive substantial decrease. Forecast consumption for Brazil is down slightly, 3 percent, from the record 4.35 million bales set in 2000/01. Argentina's spinning industry also is experiencing a decline due both to cotton production, which has fallen over 80 percent in four years, and the deteriorating internal economic situation. Mill use in India is forecast down 2.5 percent in 2001/00 at 13.2 million bales due to difficulties competing in the textile export market.

Countries showing significant consumption increases in 2001/02 include China, Turkey, and the countries of the former Soviet Union (FSU). China's mill use is expected to reach 24.25 million bales, over 26 percent to the world total. Mill use in Turkey is forecast to reach a record 5.75 million bales in 2001/02 after stumbling in the previous year. Textile and apparel export gains to the United States and the European Union stemming from currency depreciation have helped to fuel Turkey's gains. Mill use in the FSU, especially Russia and Uzbekistan, continue to recover from the economic post-Soviet breakup upheaval. Consumption in Russia is expected to reach 1.75 million bales, a level not seen since the collapse of the Soviet Union. Consumption in Uzbekistan is expected to reach a record 1.3-million bales, as the government shifts its focus to include value-added products in the spinning and processing sectors.

### China's Reforms and Impact on World Trade

China's cotton situation is impacting the world market only marginally this season, after several years of dramatic fluctuation in trade and stocks. But profound changes continue to transform China's production and distribution system. China's mill-delivered price held at about 65 cents per pound for most of the 2000/01 season, despite the rapid decline in world prices that began in January 2001. China's internal prices were supported by government policies, which restricted supplies by: (1) rationing cotton released from stocks via the auction system; and (2) placing strict limits on imports.

With the larger 2001 crop, Chinese officials anticipated that production would meet or exceed consumption and acted early to move the new crop into marketing channels. Procurement prices fell to market-clearing levels everywhere but in Xinjiang, where local authorities established a price floor. The government also authorized some private companies to procure cotton from farmers and restricted the flow of government-backed credit. These policies, combined with the larger production, have been effective in bringing China's prices in line with world prices. Moreover, China officially joined the

WTO in December of 2001, and is processing administrative changes to open a tariff rate quota for raw cotton of nearly 3.8 million bales for calendar year 2002. However, since Chinese prices are now competitive with world prices, it is unlikely that large quantities will be imported during the 2001/02 marketing year.

### World Ending Stocks

These estimates indicate an increase in world stocks to about 44 million bales, the largest level in 3 years. The increase in U.S. stocks accounts about half of the change and China's stocks are also expected to rise marginally. The pressure of low prices and aggressive U.S. export sales will increase stock-holding in both foreign cotton-producing and -consuming countries, and stocks outside of China are forecast to rise to a record level of 23.4 million bales.

### U.S. Cotton Situation, 2001/02

#### Area and Production

As planting time for the 2001 crop approached, U.S. cotton prices had fallen but alternative crops—like corn and soybeans—were also lower and were not attractive enough to pull area away from cotton. In addition, the marketing loan and insurance programs provided incentives for U.S. producers to plant more area to cotton in 2001.

Favorable springtime weather allowed producers to plant 15.8 million acres of cotton in 2001, about 2 percent more than in 2000 and the second largest in nearly four decades. Upland cotton area in 2001 totaled 15.5 million acres, up slightly from 15.3 million a year earlier. Extra-long staple (ELS) area, on the other hand, was up significantly in 2001 as acreage rebounded from a 6-year low to 261,000 acres as stock levels were trimmed by 50 percent last season.

As with total acreage planted to cotton, harvested area in 2001 also increased from the year before. In 2001, cotton area harvested was 13.8 million acres, nearly 6 percent above 2000. This resulted in a national abandonment rate of 12.5 percent or 2 million acres for 2001, compared with 16 percent (2.4 million acres) for 2000.

U.S. cotton production in 2001/02 is estimated at a record 20.1 million bales, compared with 17.2 million last season. The production rebound is attributable to the larger harvested area and a national yield estimated at 698 pounds per harvested acre, 10 percent above 2000/01 and the highest since the 1996 season. Upland production for 2001/02 is currently estimated at 19.4 million bales with an average yield of 687 pounds per harvested acre, the highest in 5 years. Meanwhile, the ELS crop is projected to total 678,000 bales, the second largest on record, aided by the 1,257-pound record yield.

Compared with last season, 2001/02 upland production is projected to rise in three of the four regions of the Cotton Belt. In the Southeast region, the upland crop is estimated to reach a high of nearly 5.5 million bales, the largest production since 1926/27. The average yield for the region in 2001 is projected at 737 pounds per harvested acre, about 100 pounds above average. In the Mississippi Delta States, upland production is projected 30 percent higher than in 2000 to a record-tying 6.9 million bales. The increase this season is the result of larger area and a 75-pound increase in yield for the region to 731 pounds. For the Southwest, upland production was once again hampered by weather.

With about 1.9 million acres estimated abandoned, the Southwest yield is pegged at 476 pounds, near the 5-year average.

In the West, upland output is expected to approach only 2.6 million bales, 500,000 below last season as some area in the region shifted from upland to ELS in 2001. Despite lower area, an above-average regional yield of 1,259 pounds per harvested acre kept production near the 5-year average. In contrast to upland cotton, ELS production in the West is projected to rise dramatically (80 percent) as producers added area and increased yields this season. California continues to dominate ELS production and is projected to account for 91 percent of the ELS crop in 2001, slightly above the previous 2 seasons.

### Domestic mill use

Domestic mill use of cotton is expected to decline about 18 percent from the 2000/01 season. Both long-term and short-term factors are contributing to the decline in mill use. The current mill use estimate, 7.3 million bales, represents a loss of 4.0 million bales, or 35 percent, from its recent peak in 1997/98. Cotton spinning has been hurt by the erosion of the domestic apparel industry, which has uncompetitive labor costs. Spinners' loss of their apparel customer base has been exacerbated by the currency depreciations that began with the 1997 Asian financial crisis. On a textile trade-weighted basis, the U.S. exchange rate has risen 18 percent since 1997, 30 percent if trade with Mexico is excluded.

Textile imports have risen nearly 5.0 million bale equivalents during the 4-year period 1997/98 to 2001/02; approximately one-third of the increase came from NAFTA countries, one-third from Asia, and one-third from other regions. Well over half of the higher imports from NAFTA were offset by higher textile exports from the U.S. to NAFTA countries, mainly Mexico. Many U.S. companies sourced their more labor-intensive textile operations in Mexico, while maintaining their capital-intensive spinning operations in the United States. However, with the dollar strengthening against foreign currencies, it is becoming more difficult for both U.S. and Mexican businesses to compete with other foreign mills, and the growth in NAFTA textile trade has slowed.

Most recently, mill use has been hurt by a decline in consumer demand for textiles associated with the economic recession. U.S. consumers used an estimated 20.7 million bales of cotton during the 1999/2000 season, declining to 20.0 million in 2000/01. This season will mark the second consecutive year of decline, with consumers expected to use only about 18.9 million bales. Growth rates for both textile imports and textile exports of cotton fell in calendar 2001 as a result of the slowdown, but import growth still exceeds that of exports and the textile trade deficit is likely to rise in 2001/02. The mill use forecast of 7.3 million bales assumes some recovery in mill use rates in the final months of the season, due to an expected recovery in retail demand. The forecast includes a 10-percent reduction in mill use of ELS cotton, to a level of 110,000 bales.

### Exports

With more than 10.0 million bales of export sales on the books, USDA is forecasting total shipments of 10.0 million bales, the largest in 75 years. Factors boosting this season's exports include: (1) large beginning stocks and production, combined with declining mill use, resulting in a U.S. exportable supply that is the largest in 35 years; (2) aggressive early-season sales by U.S. merchants, which were supported by the expiration of about 2.0 million bales of 2000-crop CCC loans; (3) the marketing loan

program, which has permitted market prices to fall in tandem with world prices while maintaining U.S. farmers' income; and (4) the reluctance of some foreign producers to sell at prices below their cost of production.

In contrast to exports of all cotton, ELS cotton exports are estimated to fall, despite substantially larger supplies. Stiff competition from Egypt and other countries, combined with the price floor set by the CCC loan rate, are constraining sales of ELS in overseas markets.

### Ending Stocks and Prices

U.S. ending stocks of 8.8 million bales are forecast this season, nearly 50 percent of total use and the largest since 1985/86. At this stock level, the U.S. would carry about 20 percent of world stocks, compared with a normal level of 10 percent. ELS cotton stocks are projected to more than double to nearly 300,000 bales.

Spot prices fell to a low of 28.4 cents per pound in October, and have risen since then to their current level of about 33 cents. The rebound resulted from a general sense that prices had become too low, rather than any apparent change in the outlook. For example, at prices approaching the mid-20's and relatively low interest rates, the option of storing cotton until next season was gaining appeal. The AWP reached its low on November 1, following which a substantial quantity of cotton was redeemed from the CCC loan.

### Farm Income

Very low cotton prices are also taking their toll on market returns, but government expenditures, combined with favorable yields, will raise farm income to near average levels this season. Upland cotton gross farm income is forecast at about \$7.4 billion for the 2001 crop, up 13 percent from the preceding year. Income from the government program will double, reaching \$3.7 billion, as very low world prices are generating large expenditures for the marketing loan program. Net returns over variable costs are estimated at about \$177 per planted acre, \$40 above last year but \$25 below the 5-year average. If market income alone were measured, a net loss of about \$60 per planted acre would result.

### World and U.S. Outlook for 2002/03

Projections for the 2002/03 marketing year are highly uncertain, due to the unpredictability of weather and the complex economic factors that affect supply and demand. For the purposes of this paper, USDA is basing projections on the following conditions and assumptions. Normal weather and growing conditions are assumed. The demand forecasts are based on economic turn-around beginning in mid-2002 and accelerating into 2003. And the policy assumption is continuation of the current U.S. farm program for the 2002 crop.

World production for the 2002/03 season is forecast at just over 90.0 million bales, a 7-percent decline from the current season. The anticipated decrease in production includes a reduction of nearly 2.5 million bales in the United States, 3.0-3.5 million bales in China, and just over 1.0 million bales in other foreign countries. World consumption is forecast to rise 2 percent based on economic recovery and an accumulation of cotton purchased at below average prices; U.S. mill use is forecast to rise

slightly, but the bulk of the increase will occur in foreign countries. World stocks are forecast to decline 3-3.5 million bales to about 40.5 million, down 7.5 percent from the 2001/02 estimate.

### Foreign Cotton Outlook, 2002/03

After surging to a near record high in 2001/02, foreign cotton production is likely to fall more than 4 million bales in 2002/03. However, at 72.5 million bales, 2002/03 foreign cotton production is expected to remain high compared with the last few years before 2001/02, despite this year's extremely low cotton prices to date. Competing crop prices are also down compared with 1997/98-1999/2000 averages, limiting opportunities to shift to other crops. World soybean prices in 2001/02 are forecast 18 percent below their earlier average, and corn prices down 9 percent.

The largest foreign production decline is expected in China, following a collapse in procurement prices there this fall. While the government has indicated that it may purchase cotton for reserve at prices above current procurement prices, Xinjiang is expected to be the primary beneficiary of such actions. Outside of Xinjiang, area devoted to cotton is likely to fall since corn and soybean prices are little changed versus year-earlier levels, while cotton prices are down sharply. China's yields are likely to strengthen on average since planted area is likely to drop more in lower-yielding provinces outside of Xinjiang, and production could fall by about 3.0-3.5 million bales.

Lower prices received through January could also result in lower output for India in 2002/03, although declines will be tempered by weak prices for competing crops. Similarly, lower output is expected from West Africa's Franc Zone, and Uzbekistan's government has announced a 65,000 hectare reduction in cotton area planned for 2002/03. Altogether, area changes and a return to more average yields suggest that the combined output of Central Asia and the Franc Zone could decline by 1 million bales. However, Pakistan is unlikely to cut area as water shortages force substitution of cotton for rice by some farmers, and southern hemisphere production could rise given the current rebound in world cotton prices since their October 2001 nadir.

After two years of stagnation, world cotton consumption is expected to rise 2 percent in 2002/03, to a record 93.5 million bales. After two years of relatively slow economic growth, the world economy is widely expected to rebound late in calendar 2002 and during 2003. This, combined with the lagged effect of low cotton prices during the first half of marketing year 2001/02, suggests world cotton consumption will resume growing. Annual changes in world cotton consumption over the last 5 years have ranged from a 2.1-percent decline to a 7.6-percent increase, averaging a 1-percent increase.

World consumption is expected to grow at twice the annual rate realized over the last 5 years due to the unusual coincidence of low prices and rebounding economic growth. The last time both lagged cotton prices fell more than 10 percent (inflation-adjusted) and world gross domestic production (GDP) growth rose by more than 2 percentage points was 1982/83. Based on historical relationships between prices, world GDP, and cotton consumption, a 2002/03 consumption gain substantially larger than 2 percent is conceivable. However, given the uncertainty behind any macro-economic forecast, and the continued structural adjustment in the global textile industry, forecasting a more conservative increase is more appropriate.

China is likely to be a net importer on a larger scale in 2002/03, owing to reduced production and continued growth in consumption. Under the new TRQ system, government of China will no longer

have the right to restrict imports, as it has in recent years. Our preliminary estimate of China's net imports is about 2.0 million bales. Even with imports at this level, China's stocks are likely to decline.

### U.S. Area, Production, and Supply

U.S. planted area in 2002 will be influenced by many factors including price prospects for cotton and alternative crops, weather during planting, the cotton marketing loan program, the insurance program, and financing opportunities. While the effect of a new farm bill could alter the supply and demand landscape dramatically, the projections in this paper are based on continuation of the current farm legislation for the 2002 crop.

As planting time for the 2002 crop approaches, U.S. price ratios based on harvest-time futures for corn vs. cotton and soybeans vs. cotton suggest that area could move out of cotton as alternative prices, although lower, are more similar to this time last year than cotton prices. Based solely on expected market returns, analysis suggests that cotton area would fall below 15 million acres. However, other non-price factors will also affect cotton plantings for the upcoming season. While the marketing loan program continues to provide a safety net for cotton producers, acreage attracted by the insurance program last season will not find similar benefits this year as the insurance election price is expected to fall 20 percent.

The general consensus within the industry is that cotton acreage will decline in 2002. Earlier this month, the National Cotton Council published results of its annual acreage survey that indicated 2002 plantings would decline about 7 percent. USDA is currently projecting a similar decrease in 2002 cotton planted area with a range between 14.5 and 15.0 million acres, which could result in the lowest area planted in 4 years. The acreage adjustments will likely vary by region as producers' expected net returns and relative risk are assessed. Although USDA is not forecasting regional area at this time, anecdotal information suggests that the largest decline may occur in the Delta region while cotton area may remain stable in the Southwest where viable alternatives are limited.

With total cotton planted area expected to decline in 2002, a return to a lower, more normal abandonment should keep harvested acreage below this season's 13.8 million acres. In addition, area declines in some high-yielding States, coupled with a return to a more normal growing season this year, suggests a retrenchment in average yields. The national yield is projected to average 635 pounds per harvested acre, about 65 pounds below 2001 but about equal to the 10-year average, weighted by area.

Based on these acreage and yield assumptions, U.S. cotton production in 2002 would range between 17.5 and 18.0 million bales, more than 2 million below this season's record crop but slightly higher than the previous 5-year average. Coupled with the current beginning stock estimate of 8.8 million bales, total U.S. cotton supplies next season would surpass 26 million bales for the second consecutive season, a feat not achieved since 1966/67.

### U.S. Mill Use and Exports

Economic recovery is likely to promote growth in retail use of cotton, after two years of decline. Foreign mills' share of the U.S. consumer market is likely to continue to rise; nevertheless, the higher retail use should allow mill use to stabilize or rise slightly. 2002/03 mill use is forecast in the range of 7.3 to 7.8 million bales.

2001/02 exports have been boosted by surplus supplies and competitive pricing under the marketing loan program, both factors which—owing to large beginning stocks—are likely to be present again next season. In addition, lower foreign production and higher foreign consumption will expand the window of opportunity for U.S. cotton sales, especially if China becomes a significant importer. And early-season competitiveness is likely to be enhanced by large quantities of 2001-crop cotton held in the CCC loan which will expire early in the fall of 2002. Our preliminary range for 2002/03 U.S. exports is 10-11 million bales.

#### U.S. and World Ending Stocks

Higher mill use and exports are not likely to reduce U.S. surplus stocks significantly by the end of 2002/03. At the mid-point of the U.S. forecast ranges, stocks would fall marginally to about 8.5 million bales, or about 47 percent of total use. Taking the most optimistic approach of combining the minimum estimates for production and the maximum estimates for offtake results in stocks of 7.5 million bales, which is about 40 percent of use. Thus, the reductions in production and increases in offtake projected are not sufficient to offset very large beginning stocks. Returning stocks to a normal historical level—which would be less than 30 percent of total use--would require lower production or larger mill use and exports, or some combination of these factors.

The world balance sheet fares better, due to its more significant reductions in supply. World stocks are forecast to fall to about 40.5 million bales, down 7.5 percent from the beginning level. The world has held stocks above 41 million in four of the past five years, but China carried large surpluses in the first three of these years. The U.S. share of world stocks has risen as China's has declined—based on these projections, about 21 percent of world stocks would be held in the U.S. again at the end of 2002/03. China's stocks are forecast to fall to 10.2 million bales, their lowest level since 1994/95, and would account for about 25 percent of world stocks. Foreign stocks outside of China would fall from about 23.5 million bales at the beginning of 2002/03 to a more normal level of near 22.0 million.